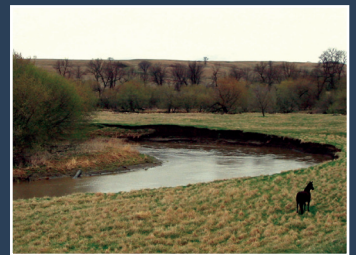
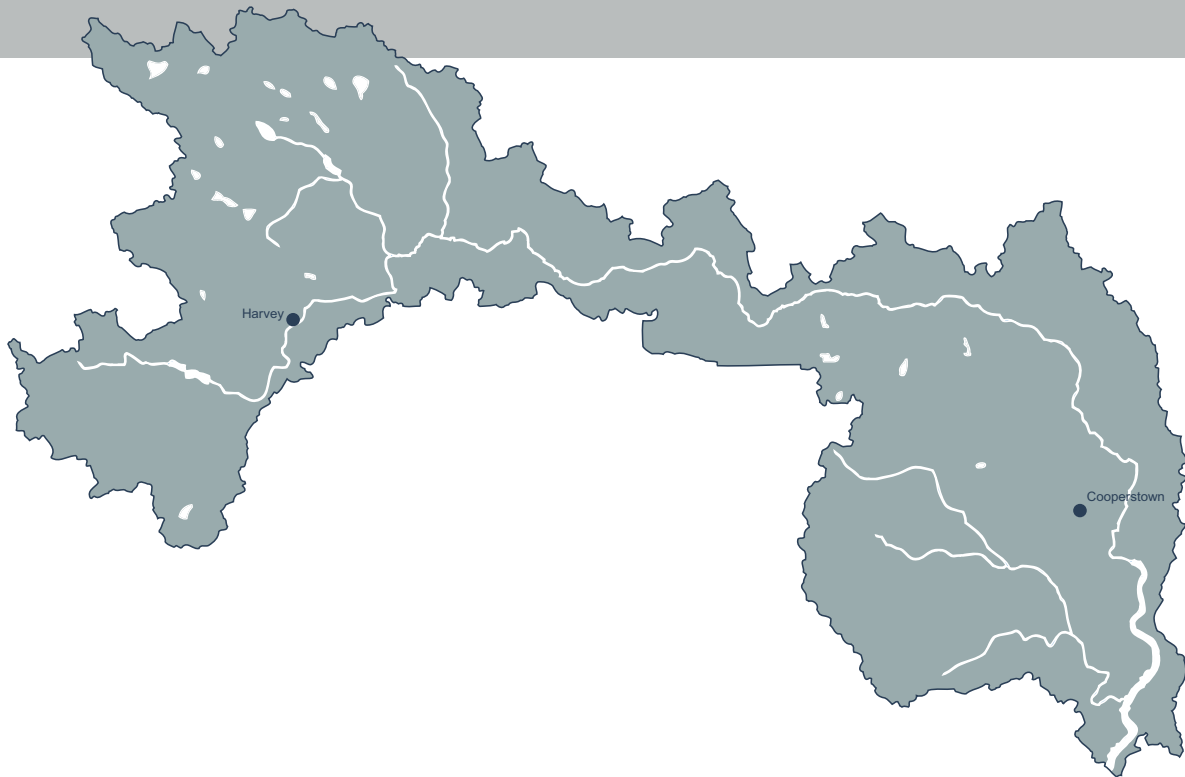


Upper Sheyenne River

Water Management Plan



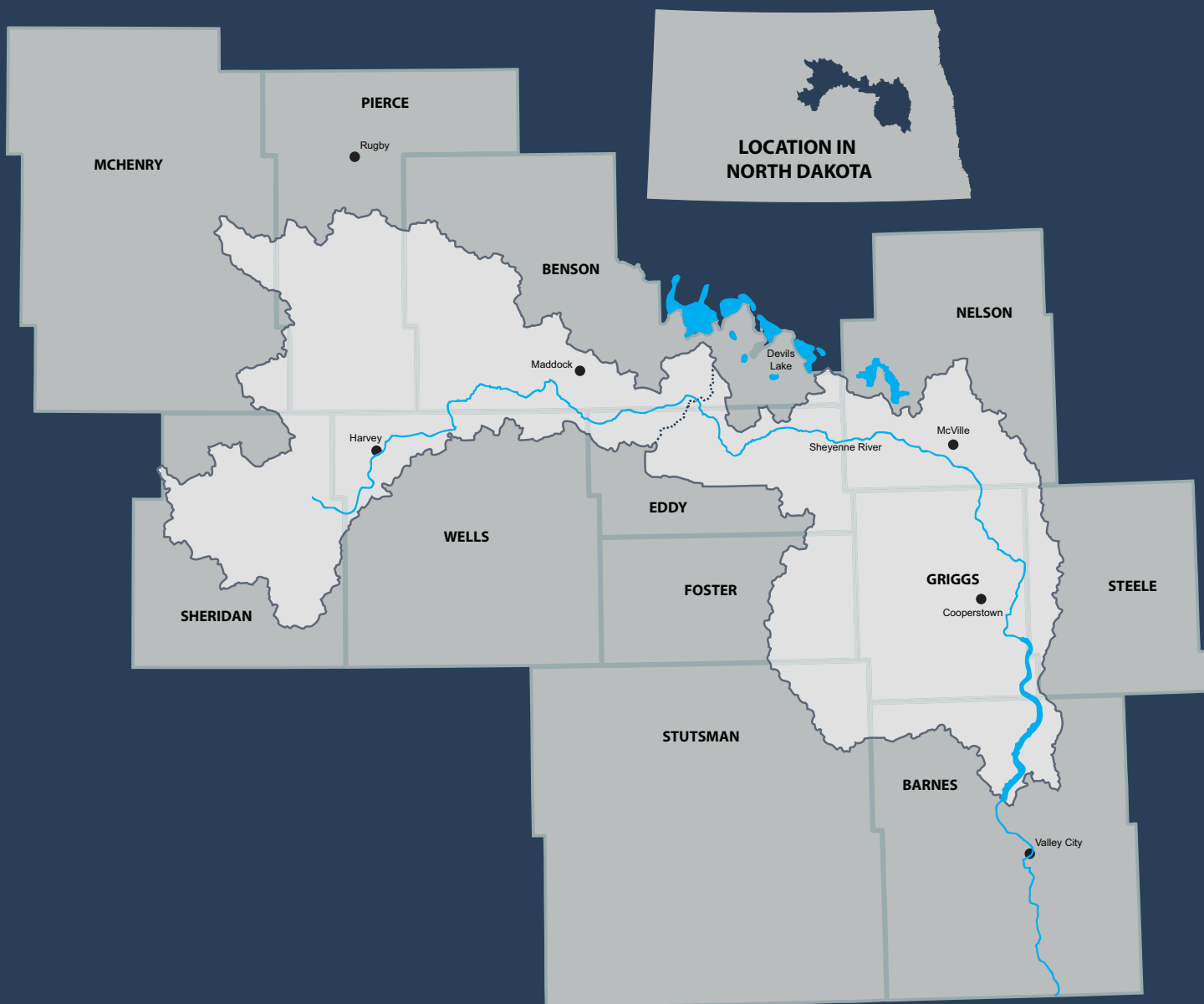
2013

Prepared by the
Upper Sheyenne River Joint Water Resources Board
and the North Dakota State Water Commission

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[Upper Sheyenne River Basin]

[INTRODUCTION]

In the early 1980's, numerous counties in eastern North Dakota began reviewing the conditions in their watersheds, and issues such as the discharge of water across county lines. Several of these counties became involved with other joint water boards throughout North Dakota, and observed how valuable a tool in water resource management that these organizations were. Barnes, Griggs, Nelson, and Steele Counties began reviewing water resource issues such as the Baldhill Dam raise, and the condition of the Upper Sheyenne River in 1984. This review led to the creation of the Upper Sheyenne River Joint Board. Over the next decade, several meetings took place, leading to decisions and participation in efforts in a cutting edge irrigation study, and possible water retention sites.

Additional water boards became involved with the Baldhill Dam raise in the early 1990's. In that same time period, consideration was repeatedly given to expansion of the Upper Sheyenne Joint Board.

In 2004, the counties of the Upper Sheyenne River Joint Board began the process of expanding the membership of the board, with the goal of including all of the twelve counties in the Upper Sheyenne River Basin, which stretches from Lake Ashtabula, to almost the Missouri River, including Barnes, Benson, Eddy, Foster, Griggs, McHenry, Nelson, Pierce, Sheridan, Steele, Stutsman, and Wells Counties. These efforts have led ten of the twelve counties to join the board.

In early 2005, the Upper Sheyenne River Basin Joint Water Resources Board (USRJWRB) began the process of developing a conceptual water management plan, with the goal of developing a cohesive and forward-thinking vision of water management in the Upper Sheyenne River Basin.

Since 2005, the Joint Board has become increasingly active in water resource management in the upper Sheyenne River basin, becoming directly involved in dam restoration projects, water quality analysis of the river, and irrigation.

MISSION STATEMENT

It is the goal of the USRJWRB to develop and implement a comprehensive, coordinated conceptual water management plan for the Upper Sheyenne River Basin that will protect the economic and other important values of the Basin while providing optimum benefits for agriculture, wildlife and fisheries, outdoor recreation, economic development, and its' citizens. This effort will be accomplished through the encouragement of cooperation and coordination of water resources efforts with water resource districts and local, state, and federal entities.

PURPOSE OF THE PLAN

The purpose of this document is to define water management issues, to begin the process of organizing and prioritizing project needs, to state objectives, and to provide strategies designed to manage the Upper Sheyenne River Basin in a manner that best meets the needs of all interested parties. Once the USRJWRB have reviewed and approved the updated Basin management plan, drawing upon the expertise of Technical Support Representatives and the public, the process of implementation of strategies can begin.

Perhaps the most important aspect of this plan is ensuring that all relevant agencies-state, federal, and private organizations, should make a unified effort to achieve the management strategies and objectives of this plan, which will serve as a constant reminder of what actions need to be completed in the Basin.

This plan is a working plan, and in that sense will never be completely finished, and will need periodic updates. It uses a loose-leaf format to outline components of the plan so the results of future work can be added with little effort. **Any changes in objectives or strategies must be approved by the USRJWRB with consultation drawing upon the input of Technical Support Representatives and the public, and will be reflected in future plan revisions.**

FUTURE UPDATES

The 2013 Upper Sheyenne River Conceptual Water Management Plan represents the conditions of the Sheyenne River Basin at this time. The purpose of the Sheyenne River Basin Water Management Plan is to provide a convenient and accessible document that will provide the citizens of the Sheyenne River Basin and state, federal, and private agencies with a road map of what has been done, what is being done, and what remains to be done.

While this plan intends to give a long-term vision of water management in the Basin, it is the nature of water management issues to change. It is important to continue to make progress towards the Basin's long-term water management goals, while still retaining the flexibility necessary to change this plan to best meet short-terms needs.

As a result, the Upper Sheyenne River Conceptual Water Management Plan will be reviewed every three years, or less if necessary, by the USRJWRB, with the assistance of Technical Support Groups and the public.

Maintaining the Upper Sheyenne River Basin Conceptual Water Management Plan provides long-term guidance, but it is also a document that must be kept current in the overall effort to resolve many of the Upper Sheyenne River Basin's water management problems. The success of this plan is dependent upon all interests continually working together for the betterment of each of our citizens.

Further, while a conceptual water management plan can be a powerful tool for change, the USRJWRB recognizes the need for future updates of the plan to contain specific actions for the board to pursue, and an eventual prioritization process to allow for a fair and effective means of focusing money and efforts in the most efficient means possible.





[UPPER SHEYENNE RIVER JOINT WATER RESOURCE BOARD]

The USRJWRB is comprised of one representative, selected by each member county from nine of the eleven county water resource districts that comprise the basin. In January of each year the Board reorganizes electing a Chairman and Vice Chairman from the county representatives.

The Upper Sheyenne River Joint Water Resource Board's mandate is *"To bring the watershed above Bald Hill Dam (Lake Ashtabula) into a partnership in order to review issues and create solutions through local, county, state, and federal cooperation."*



[USRJWRB DIRECTORS (AS OF 2013)]

Barnes County	Jerry Hieb
Benson County	Brian Maddock
Eddy County	Peter Larson
Griggs County	Lee Monson
Nelson County	Ben Varnson (Chairman)
Pierce County	Bill Deck
Sheridan County	Tom Sauter
Steele County	Tor Bergstrom
Stutsman County	Joel Lees

SUBJECT COMMITTEES

A guiding principle behind the development of the USRCWMP is local direction and involvement. For the 2013 USRCWMP, the county representatives on the USRJWRB will serve as the representatives for the Subject Committees.

TECHNICAL SUPPORT AGENCIES

The Technical Support Agencies were invited to participate in the planning process, because the USRJWRB felt that these particular groups had the technical expertise necessary. Each of the agencies appointed representatives to work closely with the Subject Committees. The Technical Support Agency Representatives acted in only an advisory role, and as such, had no voting rights, being present primarily as a resource and a sounding board for ideas developed by the Subject Committees.



[TECHNICAL SUPPORT AGENCY REPRESENTATIVES]

Garrison Diversion Conservancy District.....	Kip Kovar
Natural Resource Conservancy District.....	Andy Wingenbach
North Dakota Association of Counties	Terry Traynor
North Dakota Department of Agriculture	Bob Harsel
North Dakota Game & Fish Department	Fred Ryckman
North Dakota State University Extension Service.....	Thomas Scherer
North Dakota State Water Commission.....	Michael Noone & Randy Gjestvang
Red River Basin Commission	Lance Yohe
Red River Basin Commission & SWC Downstream Acceptance	Joe Belford
Red River Retention Authority	Pat Downs
Red River Riparian Project	Sarah Braaten
Section 319 Project.....	Lori Frank & Nathan Johnson
Sheyenne River Valley National Scenic Byways.....	Mary Lee Nielson
United States Army, Corps of Engineers	Richard Schueneman
Valley City	Mayor Werkhoven

[SUBJECT COMMITTEE RECOMMENDATIONS]

AGRICULTURE

OBJECTIVES

- 1** Ensure that the rights of property owners are protected.
- 2** Increase both the economic and environmental benefits of agriculture through the implementation of better land and water management practices.
- 3** Provide flood protection for private and public lands to protect against a specific flood event.
- 4** Cooperate with other entities and direct the development of specific plans and goals, for the Joint Board, in order to promote better conservation management practices.
- 5** Identify local, state and federal regulations that can help or hinder implementation of the Upper Sheyenne River Basin Water Management Plan.
- 6** Increase farm profits through increased commodities production using better water and land management practices and bio-fuel development.
- 7** Encourage the increase economic development through the development of irrigation in the basin for increased crop and energy production using best management practices.

OBJECTIVE 1 GOALS

Analyze all Joint Board activities, in order to determine if private property owners' rights are being protected.

Balance the needs of agriculture with other uses in respect to township and/or county zoning regulations.

OBJECTIVE 2 GOALS

Develop mechanisms to address the problem of Basin soils that are considered to be alkali or saline.

Continue to encourage the research of techniques used to identify the various water management practices affects on salt movement and accumulation.

Investigate possible funding sources for various water management practices through funds available in all available sources.

Encourage the use of Best Management Practices in all future water management projects in the Basin.

Encourage education about the issues associated with tile drainage.

Encourage the adoption of consistent tile drainage permitting processes in all North Dakota counties.

OBJECTIVE 3 GOALS

Continue to develop management practices for water storage and handling in the Basin to minimize crop losses.

Develop procedures that address those issues that arise from the use of private and public lands to alleviate flooding.

Develop a generic channel maintenance program with adequate funding, using NDCC 61-16.1-09.1 authorization.

Encourage advisory groups to assist in the development of plans to manage rain events of various sizes in order to minimize local losses and to help manage water flows for the benefit of downstream entities.

OBJECTIVE 4 GOALS

Continue to encourage the implementation of conservation practices, funded through various agency programs.

OBJECTIVE 5 GOALS

Encourage the development of mechanisms whereby payment-in-lieu-of-taxes that are made on land in the Basin, are equal to the full amount of property taxes that were paid prior to a public or non-profit entity gaining ownership of that land.

Conduct research on the purchase of private lands by sovereign nations, in order to ensure that the amount paid to local taxing authorities remains the same.

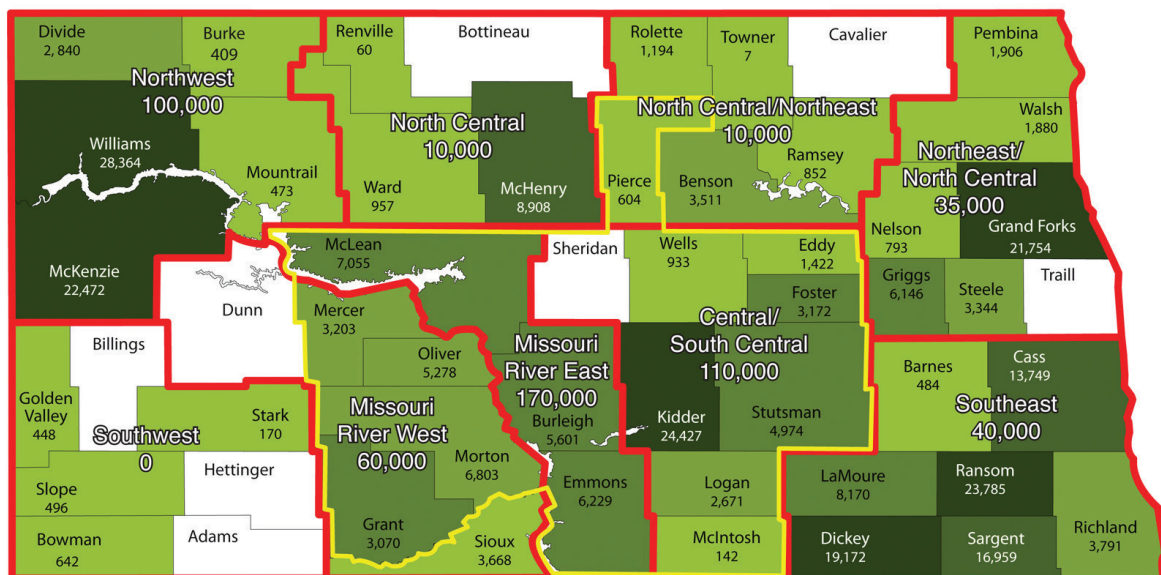
Encourage education on the value of wetlands to Basin residents including current regulations and/or voluntary wetland agreements.

Ensure that the local community has input into any future wetland regulations that would impact the Basin.

Balance the needs of agricultural producers with the goals of regulatory agencies for the protection of wildlife and fisheries.

Investigate the development of a Basin-wide “wetlands bank” for use in mitigating acres of wetlands being altered by either private or public entities.

Irrigated Acreage & Potential Irrigation Development in North Dakota



North Dakota Irrigated Acreage 2010 - (Divide 2,840)
and Potential Irrigation Development - (Northwest 100,000)

- NDIA Strategic Plan Areas for Potential Irrigation Development (2012)
- SWC (1995) and NDSU (1982) Studies

Irrigated Acreage
per County

- 3.0 - 1554.0
- 2517.6 - 3806.0
- 4738.4 - 8187.4
- 9599.3 - 15,128.0
- 17,755.7 - 23,824.8

OBJECTIVE 6 GOALS

Encourage the identification of adequate water supplies for ethanol production facility siting.

Encourage a better relationship between, and utilization of, byproducts of ethanol production in agriculture, such as livestock operations.

Support the Healthy Soils Initiative.

OBJECTIVE 7 GOALS

Encourage the creation of a map showing lands in the Upper Sheyenne River basin which have potential for irrigation development and identify and support activities which promote irrigation development of these lands.

Encourage the identification and pursuit of conventional and innovative ways to develop water supplies for irrigation such as retention ponds, recharge, horizontal wells, and other means.

Encourage the Identification and promotion of irrigation development, for the production of conventional, energy related, and other crops for increased economical development, and provide that information to potential irrigators on opportunities and benefits of irrigation.

Support the BeetsAll Biofuel (Green Vision) Project presently under research and development in North Dakota.

Encourage the appropriate entities to identify and pursue funding sources to assist in irrigation development in the basin.

ACCOMPLISHMENTS SINCE THE 2008 PLAN UPDATE

The State Water Commission has adopted ability to pay as a factor in determining cost-share percentages for water projects.

SPECIFIC ACTIONS TO BE ACCOMPLISHED OR INITIATED PRIOR TO 2016 USRCWMP

Encourage State Water Commission to adopt maximum and minimum sizing standards for culverts along drains and ditches.



[SUBJECT COMMITTEE RECOMMENDATIONS]

ECONOMIC DEVELOPMENT

OBJECTIVES

- 1 Recommend that entities capitalize on the economic resources of the Upper Sheyenne River Basin.
- 2 Encourage the creation a basin-wide economic development effort utilizing existing Basin economic development organizations.

OBJECTIVE 1 GOALS

Recommend the increase in economic development opportunities through improved water and land management (including fee and public access hunting and hiking), utilizing local lodging and restaurant taxes, through adoption of county home rule charters where possible, and continue to promote educational programs on available economic opportunities.

Continue to support the irrigation potential in the Basin by providing assistance to participating producers in order to make the program economically enticing.

Encourage the development of non-traditional income producers, such as canoeing, bed & breakfasts, bird watching, rural vacation packages, hiking, and scenic byways.

Encourage the utilization the expertise and information available from the North Dakota Tourism Division, that serve the Basin, to develop value added opportunities in agriculture.

OBJECTIVE 1 GOALS

Encourage the expansion of agricultural “tourism” with local farmers including crop tours, farm and ranch vacation packages, and suitable marketing materials.

Encourage that the Basin-wide community’s infrastructure capabilities are adequate to support increased economic development activities and ensure a quality of place for current and future residents of the Basin (including, but not limited to: adequate roads, including future maintenance needs; adequate airport, airline and charter services; motel and resort facilities; medical and educational facilities and services; community and rural utilities.)

Support the Upper Sheyenne Basin Water Management Plan’s Recreation Committee recommendations on increasing tourism-related activities throughout the Basin.

Encourage cooperation and communication between Basin economic development groups and resident recreational interests.

Encourage future water development projects in the Basin be developed with the economic development of the Basin in mind, such as the Red River Valley Water Supply Project.

OBJECTIVE 2 GOALS

Promote increased communication and cooperation between Basin economic development groups.

Encourage the development of a closer working relationship with other jurisdictions throughout the Basin.

Encourage annual meetings of the representatives of all Basin economic development organizations to set priorities in the implementation of plans and projects. This process should be initiated and coordinated by the Upper Sheyenne River Basin Joint Water Resource Board.

Continue to encourage cooperative ventures and projects; including, but not limited to: labor market studies, regional and national trade shows and ND Department of Commerce programs.



[SUBJECT COMMITTEE RECOMMENDATIONS]

RECREATION

OBJECTIVES

- 1 Develop recreational opportunities in the Upper Sheyenne River Basin.

OBJECTIVE 1 GOALS

Encourage the creation of incentives for opportunities to expand recreation access in the Basin.

Continue efforts to educate the general public about courtesies relating to recreation in the Basin.

Promote landowner's perception of wildlife and waterfowl as an "asset" rather than a "liability".

Encourage the increase non-consumptive wildlife recreation in the Basin through the use of promotion, education, increased viewing sites, other marketing efforts and infrastructure investment.

Secure support, as appropriate, for expanded recreational opportunities in the Basin by providing economic benefit information to State Legislators, farm organizations, financial institutions and other involved parties.

Support work to develop and promote the distribution of a Basin-wide recreation information brochure working with all interested parties including: chambers of commerce, tourist and convention bureaus, economic development groups, rural electric cooperatives, and others.

OBJECTIVE 1 GOALS

Support the stocking of area lakes and rivers with desirable species of fish.

Increase the promotion of and access to hunting and fishing in the Upper Sheyenne River Basin, including shoreline-fishing opportunities.

Coordinate the Upper Sheyenne River Basin Recreation Plan with the North Dakota State Recreation plan and other agency plans as it is revised and updated.

Encourage the coordination of information and studies done by state agencies to determine economic benefits to Basin recreation programs.

Encourage state agencies to cooperate with Basin recreation organizations in the promotion of domestic and international tourism.

Encourage annual meetings of the representatives of all Basin recreation promotional organizations to set priorities and discuss plans and projects.

Continue to work with state, federal, and private agencies to increase awareness of, and develop educational materials on the risks of aquatic nuisance species (ANS).

Help to encourage and promote riparian recreational activities, such as kayaking, canoeing, camping, hiking, and wildlife watching.

ACCOMPLISHMENTS SINCE THE 2008 PLAN UPDATE

North Dakota Game and Fish has provided a seat on ANS Task Force for a representative of the Joint Board.

SPECIFIC ACTIONS TO BE ACCOMPLISHED OR INITIATED PRIOR TO 2016 USRCWMP

Encourage North Dakota Parks and Recreation to develop a canoeing and kayaking brochure for the Sheyenne River.



[SUBJECT COMMITTEE RECOMMENDATIONS]

WILDLIFE & FISHERIES

OBJECTIVES

- 1** Enhance grassland, woodland and wetland acreages and riverine habitat for the sustainability of wildlife and fisheries resources in the Upper Sheyenne River Basin.
- 2** Manage water quality and quantity for the benefit of Upper Sheyenne River Basin fisheries and wildlife.
- 3** Encourage continuation and intensification of agricultural conservation practices that are beneficial to agriculture, wildlife and fisheries in the Upper Sheyenne River Basin.
- 4** Encourage the implementation of programs that encourage increased youth participation in hunting, fishing and outdoor recreation.
- 5** Encourage improved communication between agricultural and outdoor interest groups.

OBJECTIVE 1 GOALS

Continue to explore and develop methods that will enhance the quality of existing habitat (i.e., PLOTS program and WaterBank).

Encourage respect for private and public property rights.

Encourage improving the ability of the public to be able to provide input on issues regarding wetland retention.

OBJECTIVE 1 GOALS

Encourage the funding of existing voluntary programs designed to create new incentives to improve the quality and diversity of habitat on private lands.

Encourage the maintenance of existing programs designed to monitor and test established enhancement methods.

Encourage the management of federal, state, non-profit and private lands to improve production of wildlife and fisheries.

OBJECTIVE 2 GOALS

Identify land management practices that both improve and degrade water quality and quantity.

Continue to develop and implement programs that inform the community of the importance of water quality initiatives and continue developing strategies to implement water quality practices.

Work with state, federal, and private agencies to increase awareness of, and prevent the introduction of ANS into the waters of the Upper Sheyenne River basin.

OBJECTIVE 3 GOALS

Continue to support the expansion of implementation of high residue tillage, nutrient management, erosion control, livestock waste management, soil health, and other sound agricultural management practices.

Identify funding sources that provide greater incentives for conservation practices.

OBJECTIVE 4 GOALS

Encourage programs designed to increase interest in hunting, fishing and outdoor recreation.

Encourage the funding of youth educational and safety programs.

Encourage the enhancement, creation, and expansion of programs that are intended to facilitate youth hunting, fishing, and non-consumptive outdoor recreation.

OBJECTIVE 5 GOALS

Identify areas of common interest.

Support the development and implementation of methods designed to facilitate cooperation through increased communication.

Support the education of community residents and visitors about the respect and courtesies required for good landowner and outdoor interest organization relations.

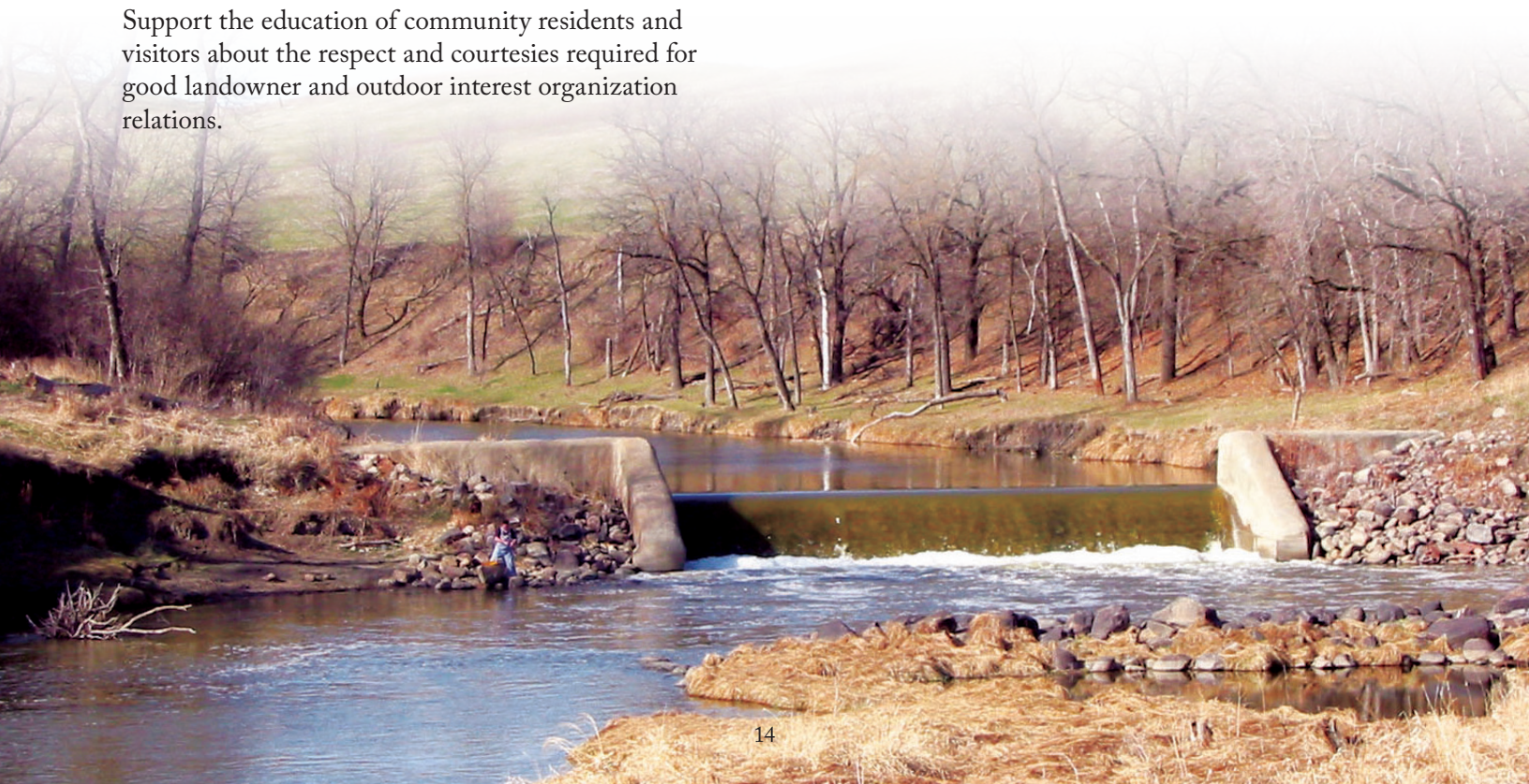
ACCOMPLISHMENTS SINCE THE 2008 PLAN UPDATE

The development of a basin-wide water quality monitoring program.

Develop a priority list of dam restoration/removal projects in the upper Sheyenne River Basin for completion after Warwick Dam.

SPECIFIC ACTIONS TO BE ACCOMPLISHED OR INITIATED PRIOR TO 2016 USRCWMP

Encourage and support grassland and water retention in the basin, through programs such as the Conservation Reserve Program (CRP), and others.



[CONTACT INFORMATION]

FOR FURTHER INFORMATION

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